

### **C 319. EFFECTS OF MICROCURRENTS AND PHYSICAL EXERCISE ON THE ABDOMINAL FAT: A RANDOMIZED CONTROLLED TRIAL IN PATIENTS WITH CORONARY ARTERY DISEASE**

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**Objectives:** Coronary artery disease are associated with decreased levels of physical activity, contributing to increases in abdominal fat and consequently the metabolic risk. The use of microcurrents is an innovative and effective method to increase lipolytic rate of abdominal adipocytes.

This study aims to investigate the effects of microcurrents with a homebased exercise program on total, subcutaneous and visceral abdominal adipose tissue in subjects with coronary artery disease.

**Methods:** This controlled trial included 44 subjects with myocardial infarction, randomly divided into Intervention Group 1 (IG1; n = 16), Intervention Group 2 (IG2; n = 12) and Control Group (CG; n = 16). IG1 performed a specific exercise program at home during 8 weeks, and IG2 additionally used microcurrents on the abdominal region before the exercise program. All groups were subjected to health education sessions. Computed Tomography was used to evaluate abdominal, subcutaneous and visceral fat, accelerometers to measure habitual physical activity and the semiquantitative Food Frequency Questionnaire for dietary intake.

**Results:** After 8 weeks, IG2 showed a significantly decreased in subcutaneous fat ( $p \leq 0.05$ ) when compared to CG. Concerning visceral fat, both intervention groups showed a significant decrease in comparison to the CG ( $p \leq 0.05$ ). No significant changes were found between groups on dietary intake and habitual physical activity, except for sedentary activity that decreased significantly in IG2 in comparison with CG ( $p \leq 0.05$ ).

**Conclusions:** This specific exercise program showed improvements in visceral fat in individuals with coronary artery disease. Microcurrent therapy associated with a home-based exercise program suggested a decreased in subcutaneous abdominal fat.